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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,679	08/01/2001	Juliana H.J. Brooks	BLP:101 (a) US-CIP	6650

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EXAMINER
HANLEY, SUSAN MARIE

ART UNIT	PAPER NUMBER
1651	

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/919,679	BROOKS ET AL.	
	Examiner	Art Unit	
	Susan Hanley	1651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 June 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

S.00

DETAILED ACTION

The amendment filed 6/1/05 has been entered.

Claims 1-15 are pending.

Response to Arguments

Applicant's arguments filed 6/1/05 have been fully considered but they are not persuasive.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

Claims 1-4, 7-13 and 15 stand rejected under 35 U.S.C. 102(b) as being clearly anticipated by Lichtin et al. (US 4,861,484).

Applicant argues that Lichtin does not appreciate or disclose the importance of first determining the claimed "at least one frequency" followed by the exposure step and that Lichtin does not make any connection between the most effective frequencies for enhancing the activity of the absorption/emission spectrum of the catalyst. Applicant asserts that Lichtin discloses 26 catalysts and three different light sources which give off a very broad group of frequencies to energize the reactants. Applicant alleges that the inventive concept for the instant application is the use of catalyst specific frequencies. Applicant further argues that Lichtin uses a shotgun approach and has not "duplicated" the enhancing frequency or determined the spectral pattern of his catalyst. Applicant asserts that Lichtin does not match the 26 catalysts with the broad spectrum light sources or that Lichtin knows or has determined the emission spectrum of his catalyst.

Responding to Applicant's argument regarding the alleged lack of disclosure by Lichtin related to the determination of at least one frequency followed by the exposure step, Lichtin teaches that the

reaction mixture is exposed to wavelengths absorbable by the transition element catalyst which are most effective in enhancing the activity of said catalyst (col. 12, lines 40-45). This disclosure is equivalent to steps 1 (a), 1 (b), 13 and 15 because the step comprising the determination of the wavelengths most effective in enhancing the activity of the catalyst inherently requires that the spectrum of the catalyst is known since Lichtin uses the optimal wavelengths to enhance the activity of the catalyst. Furthermore, Lichtin teaches that "Each solid catalyst contains at least one transition reaction element able to absorb photoenergy of a specified type and wavelength range" (col. 11, lines 7-12). This disclosure implies that a spectrum of the catalyst was obtained by someone and that Lichtin used the results (i.e. "duplicated") to determine the optimal wavelengths to enhance catalytic activity. Responding to Applicant's argument that Lichtin is using a shotgun approach from various sources to give off a very broad group of frequencies to energize the reactant, the instant claims are not limited to the use of a certain range of wavelengths. In fact, the claims are drawn to "at least one frequency." Therefore a light that provides a range of wavelengths that activates the catalyst meets the claim limitations. The fact that Lichtin uses radiant sources that provide light in a certain frequency range (i.e. UV vs. visible) demonstrates he knows the optimal wavelengths to augment the catalyst. Again, the claims do not limit the frequency of the irradiating light to a single one. The fact that Lichtin uses 26 catalysts is irrelevant because the catalysts are used singly or in combinations (col. 11, lines 5-10) and the instant claims are not limited to a single catalyst.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the use of the emission spectrum of the catalyst to augment the reaction system) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claims 1, 3, 4, 7, 8 and 10-15 stand rejected under 35 U.S.C. 102(b) as being clearly anticipated by Pratt, Jr. (US 4,115,280).

Applicant argues that the determination of the wavelength that most enhances the catalyst activity is not appreciated by Pratt as being the same thing as determining the electromagnetic spectrum of the catalyst and that even if Pratt were to recognize that his technique might be determining a spectral pattern, he does not meet the limitation of independent claims 1 and 13 because his results would correlate to the spectral pattern of the entire reaction system. Applicant alleges that Pratt uses the shotgun approach and that the instant specification teaches that hit-or-miss experimentation should not be required to augment the catalyst if it is degraded or weakened.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., Pratt is not determining the EM spectrum of solely the catalyst and is instead utilizing the spectrum of the entire reaction system) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). In the instant case, the claims have open language "comprising" and the determination of the EM spectrum and the subsequent use of it to augment the catalyst is not confined only to the catalyst. Therefore, the claims read on an entire reaction system. Furthermore, Pratt specifically discloses that "one determined frequency and the amplitude can be controlled, thereby selectively to affect particular macromolecular species (of many disposed within the liquid cell)" (col. 10, lines 25-28). Thus, Pratt contemplates determining the frequencies that selectively augment the macromolecule catalyst in a reaction milieu. This disclosure also demonstrates that Pratt is not using a shotgun or hit-or-miss approach since he is selecting certain wavelengths to increase catalytic efficiency. Regarding disclosure by the instant specification that the present invention does not employ a "hit-or-miss' approach, it is inappropriate to import claim limitations from the disclosure in the specification.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan Hanley whose telephone number is 571-272-2508. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn can be reached on 571-272-0926. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Susan Hanley
Patent Examiner
1651

JEAN C. WITZ
PRIMARY EXAMINER